

REMARKS

This paper is responsive to the Office Action dated August 17, 2005 (the "Office Action").

Claims 1-18 were previously pending in the application.

Claim 1 has been amended in this paper.

No claims have been added or canceled in this paper.

Accordingly, claims 1-18 remain pending in the application.

Claims 1-8, 13, and 14 stand rejected.

Claims 3-6, 9-12, and 14-15 are understood to be under objection.

Claims 1-6 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Claims 1, 2, 7, 8, 13, and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,151,582 issued to Huang et al. ("*Huang*") in view of A. Papageorgiou et al., "Faster Evaluation of Multidimensional Integrals" (1997) ("*Papageorgiou*"). Applicant respectfully submits that the claims are allowable and respectfully requests reconsideration in view of the following remarks.

Allowable Subject Matter

Applicant gratefully acknowledges the indication that claims 3-6, 8-12, and 15-18 would be allowable if rewritten to overcome the rejections under § 101 and to include all of the limitations of the base claim and any intervening claims. At this time, Applicant wishes to maintain claims 3-6, 8-12, and 15-18 in dependent form in view of the following remarks regarding the allowability of the base claims.

Formal Matters

The Office Action Summary of the present Office Action indicates that Applicant's claims 3-6, 9-12, and 14-15 are subject to a restriction and/or election requirement. The Office Action does not, however, elaborate on a restriction or election requirement for these claims, and

does not set forth grounds for the restriction. Rather, the Office Action indicates that these claims include claims with allowable subject matter. Accordingly, Applicant has understood the restriction requirement as being a typographical error in the Office Action Summary, and that claims 3-6, 9-12, and 14-15 are currently under objection. If this understanding is incorrect, Applicant respectfully requests clarification regarding the nature of the restriction requirement so that Applicant may respond appropriately.

Rejections Under § 101

Claims 1-6 stand rejected under § 101 as being directed to non-statutory subject matter. As amended, independent claim 1 is directed to a “computer-implemented method for the estimation of mean production for assemble-to-order manufacturing operations.” Claims 2-6 depend from claim 1. Applicant respectfully submits that amended claims 1-6 apply, involve, use, or advance the technological arts, are directed to statutory subject matter, and are allowable under § 101. Accordingly, Applicant respectfully requests that the rejections under § 101 be withdrawn.

Rejections Under § 103(a)

Claims 1, 2, 7, 8, 13, and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Huang* in view of *Papageorgiou*. While not conceding that the Examiner’s cited reference qualifies as prior art, but instead to expedite prosecution, Applicant has chosen respectfully to traverse the rejection as follows. Applicant reserves the right, for example in a continuing application, to establish that the Examiner’s cited reference does not qualify as prior art as to an invention embodiment previously, currently, or subsequently claimed.

The cited art lacks a teaching or suggestion to combine the references supporting the pending rejections.

Applicant respectfully submits that the cited references lack a teaching or suggestion to combine *Huang* and *Papageorgiou* as used in the Office Action in support of the rejections under § 103(a).

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the

knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure.

MPEP § 2142 (citing *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991)).

As indicated in the Office Action, *Huang* does not disclose all of the limitations of independent claim 1. For example, *Huang* does not disclose formulating a sum of multidimensional integrals corresponding to the estimation of mean production for a specified product. Office Action at 3-4. The Office Action proposes, however, that it would have been obvious to a person having ordinary skill in the art to modify the disclosures of *Huang* to incorporate the teachings of *Papageorgiou*. *Id.* at 4.

The Office Action does not, however, state or present a suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify or to combine the teachings of *Huang* and *Papageorgiou*. The Office Action proposes that it would have been obvious to a person of ordinary skill in the art to modify the disclosure of *Huang* with the teachings of *Papageorgiou* "to determine the accuracy of the product production." *Id.* However, *Huang* does not discuss product production or the accuracy of production. Thus, a skilled practitioner reading *Huang* would not be motivated to determine the accuracy of product production, and would certainly not turn to *Papageorgiou* with the motivation proposed in the Office Action.

The Office Action thus falls short of the requirements for setting forth a rejection under § 103(a). "The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done." *Id.* (citing *Ex parte Clapp*, 227 U.S.P.Q. 972, 973 (Bd. Pat. App. & Inter. 1985)). Accordingly, the Office Action fails to establish a *prima facie* case of obviousness.

Further, Applicant sees no suggestion or motivation in the cited references that would lead to the proposed combination of *Huang* and *Papageorgiou*. Applicant notes that the two references are from disparate fields: *Huang* relates to a system for supporting management decisions associated with manufacturing of service supply chains that span from a point of

creation to a point of consumption (*Huang* at col. 1, lines 12-21); in contrast, *Papageorgiou* is a mathematical analysis that reports on test results for various quasi-Monte Carlo techniques of dealing with multidimensional integrals. Neither reference appears to address the subject matter included in the other. In particular, Applicant sees no motivation or suggestion in *Huang* that would lead a person having ordinary skill in the art to turn to *Papageorgiou*.

Applicant notes that *Huang* does discuss “accuracy,” albeit in a different context than that set forth in the Office Action. *Huang* sets forth tools for assessing the accuracy of past sales forecasts. *Huang* at col. 22, lines 38-53, *ff.* However, these assessments of past sales forecasts are not related to the Office Action’s proposed motivation of determining the accuracy of product production, since sales forecasts are hypothetical prospective estimates and product production is an actual real-time process. Further, this discussion of accuracy in *Huang* is self-contained. *Huang* sets forth adequate and complete techniques for assessing the accuracy of past sales forecasts, including various alternative assessments and the corresponding mathematical formulations. *See, e.g., id.* at col. 90, lines 12-44. A person of ordinary skill in the art therefore would not look beyond *Huang* to seek techniques for assessing the accuracy of past sales forecasts, and would not turn to *Papageorgiou* with such a motivation. Thus, on reading *Huang*, a person of ordinary skill in the art would not find a suggestion or motivation therein to turn to *Papageorgiou*.

Applicant further notes that the converse is also true: a skilled practitioner reading *Papageorgiou* would also not find therein a suggestion or motivation turn to *Huang*. *Papageorgiou* is a mathematical analysis that reports on test results for various quasi-Monte Carlo techniques of dealing with multidimensional integrals. This reference does not discuss, teach, or suggest the concept of determining the accuracy of product production. Further, *Papageorgiou* also does not suggest or set forth a motivation for a reader to seek tools for assessing the accuracy of past sales forecasts. Additionally, Applicant sees no other aspect of *Papageorgiou* that could be understood as providing a suggestion or motivation to a skilled person to combine this reference with *Huang*.

With the cited references lacking such a motivation or suggestion for the proposed combination of references, the Office Action fails to establish a *prima facie* case of obviousness. Accordingly, Applicants respectfully submits that independent claim 1, and all claims dependent

therefrom, are allowable under § 103(a). At least for similar reasons, independent claims 7 and 13, and all claims dependent therefrom, are also allowable under § 103(a). For at least this reason, Applicant respectfully requests that the rejections under § 103(a) be withdrawn.

*The cited combination of references would
not have a reasonable expectation of success.*

Additionally, Applicant respectfully submits that, even if such a combination were based on a proper motivation or suggestion, the combination of *Huang* as *Papageorgiou* would not lead to a reasonable expectation of success in reaching the method of Applicant's claim 1. The cited section of *Huang* describe a domain support system that allows a user to access dialog boxes for editing, creating, and deleting user domains. *Huang* at col. 104, lines 5-67. The techniques of *Huang* would not benefit from the use of *Papageorgiou*'s teachings regarding multidimensional integrals. Indeed, Applicant submits that the use of multidimensional integrals would not lead to any useful result in the system of *Huang*, since it is not clear how such mathematical techniques would benefit the system of *Huang*.

Huang refers to "integration" at several points. For example, this reference describes a Supply Chain Frame Manager that is responsible for two types of integration: System Integration and Functional Integration. A System Integrator is responsible to interpret a client's request, to dispatch the request to the appropriate servers, and to coordinate a computation load and data access. A Functional Integrator provides the functionality associated with overall supply chain, as opposed to individual frames. These functionalities include Supply Chain Configuration, Domain Management, user access or privilege administration, and performance monitoring or simulation. *Id.* at col. 90. line 63—col. 91, line 6.

These features of "integration" in *Huang*, however, are related to activities of combining and coordinating activities in a process. They refer to "integration" in the context of management and organization, not in the mathematical sense of integration. They are therefore not related to the mathematical integration that is the subject of *Papageorgiou*. A person of ordinary skill in the art would readily recognize that the mathematical techniques of *Papageorgiou*, and in particular, the multidimensional mathematical integration tools therein, would not be usable for the "integration" functions of *Huang*.

Accordingly, Applicant respectfully submits that the proposed combination of references would not lead to a reasonable expectation of success. For this reason as well, independent claim 1, and all claims dependent therefrom, are allowable under § 103(a). At least for similar reasons, independent claims 7 and 13, and all claims dependent therefrom, are also allowable under § 103(a). For at least these reasons as well, Applicant respectfully requests that the rejections under § 103(a) be withdrawn.

The rejections under §103(a) depend on cited art that does not disclose each limitation of the claims.

Finally, even if the cited references *Huang* and *Papageorgiou* could be properly combined under § 103(a), the resulting combination would not disclose each limitation of the rejected claims. As noted in the Office Action, *Huang* does not disclose formulating a sum of multidimensional integrals corresponding to the estimation of mean production for a specified product. Office Action at 3-4. *Papageorgiou* also fails to disclose this limitation.

Papageorgiou sets forth mathematical analysis that reports on test results for various quasi-Monte Carlo techniques of dealing with multidimensional integrals. *Papageorgiou* discusses the properties of various mathematical techniques, and focuses on an evaluation of these techniques. The results of the mathematical techniques in *Papageorgiou* are set forth in section 3 of that reference. The techniques are examined in their application to a test problem, which is set forth as a purely mathematical challenge (*see, eg., eqn. (3) in Papageorgiou*). The only applications noted in the reference for these techniques are those that arise “in many branches of physics.” *Papageorgiou* at 1.

While *Papageorgiou* is related to multidimensional integrals, this reference does not teach, discuss, or suggest the use of applying multidimensional integrals or any other mathematical techniques for calculations involving the production for a specified product. Further, *Papageorgiou* does not disclose or even refer to the estimation of mean production for a specified product.

Claim 1 includes a limitation of formulating a sum of multidimensional integrals corresponding to the estimation of mean production for the specified product. This limitation is not disclosed in the cited references. Accordingly, for this reason as well, Applicant respectfully submits that independent claim 1, and all claims dependent therefrom, are allowable under § 103(a). At least for similar reasons, independent claims 7 and 13, and all claims dependent therefrom, are also allowable under § 103(a). For at least these reasons as well, Applicant respectfully requests that the rejections under § 103(a) be withdrawn.

CONCLUSION

Applicant submits that all claims are now in condition for allowance, and an early notice to that effect is earnestly solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is requested to telephone the undersigned.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P. O. Box 1450, Alexandria, Virginia, 22313-1450, on December 19, 2005.

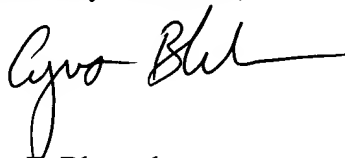


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Date of Signature

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